

CLAIM AMENDMENTS

1. (CURRENTLY AMENDED) A method for quadrature-bias compensation in a Coriolis gyro, whose resonator ~~(1)~~ is in the form of a coupled system comprising a first and a second linear oscillator ~~(3, 4)~~, in which the first oscillator is attached to a gyro frame of the Coriolis gyro by means of first spring elements and the second oscillator is attached to the first oscillator by means of second spring elements, having the following steps:

- determination of the quadrature bias of the Coriolis gyro,
- production of an electrostatic field in order to vary the mutual alignment of the two oscillators ~~(3, 4)~~ with respect to one another, with the electrostatic field producing a constant force which causes a change in the alignment of the first spring elements and/or a change in the alignment of the second spring elements, and with the alignment/strength of the electrostatic field being regulated such that the determined quadrature bias is as small as possible.

2. (CANCELED)

3. (CURRENTLY AMENDED) The method as claimed in claim 1 2, characterized in that the alignment of the first spring elements ~~{5₁ to 5₄}~~ is varied by varying the position/alignment of the first oscillator ~~{3}~~ by means of the electrostatic field, and in that the alignment of the second spring elements ~~{6₁, 6₂}~~ is varied by varying the position/alignment of the second oscillator ~~{4}~~ by means of the electrostatic field.

4. (CURRENTLY AMENDED) The method as claimed in claim 1 2~~or 3~~, characterized in that the electrical field results in the alignments of the first and second spring elements ~~{6₁, 6₂, 5₁ to 5₄}~~ being made orthogonal with respect to one another.

5. (CANCELED)

6. (CURRENTLY AMENDED) A Coriolis gyro, having a
first whose resonator ~~(1)~~ which is in the form of a coupled
system comprising a first and a second linear oscillator ~~(3, 4)~~,
with the first oscillator being attached to a gyro frame of the
Coriolis gyro by means of first spring elements, and the second
oscillator being attached to the first oscillator by means of
second spring elements, having,
characterized by

- a device for production of an electrostatic field ~~(11₁!, 11₂!, 10₁ to 10₄)~~ by means of which the alignment of the two oscillators ~~(3, 4)~~ with respect to one another can be varied, in which the electrostatic field produces a constant force which varies the alignment angle of the first spring elements with respect to the gyro frame and/or the alignment angle of the second spring elements with respect to the first oscillator,
- a device ~~(45, 47)~~ for determination of any quadrature bias of the Coriolis gyro, and
- a control loop ~~(55, 56, 57)~~, by means of which the strength of the electrostatic field is regulated as a function of the determined quadrature bias such that the determined quadrature bias is as small as possible.

7. (CANCELED)

8. (CANCELED)

9. (CANCELED)

10. (CURRENTLY AMENDED) The Coriolis gyro as claimed

in claim 6 one of claims 7 to

9, characterized in that all of the second spring elements ~~to~~^{6, to}
~~6,~~ which connect the second oscillator ~~(4)~~ to the first
oscillator ~~(3)~~ are designed such that force is introduced from
the first oscillator ~~(3)~~ to the second oscillator ~~(4)~~ essentially
from one side of the first oscillator ~~(3)~~.

11. (CURRENTLY AMENDED) The Coriolis gyro as claimed

in claim 6 one of claims 7 to 10, characterized in that

all of the first spring elements ~~to~~^{5, to 5,} which connect the
first oscillator ~~(3)~~ to the gyro frame ~~(7, 7,~~ of the Coriolis
gyro are arranged parallel and on the same plane as one another,
with the start and end points of the first spring elements ~~to~~^{5, to}
~~5,~~ each being located on a common axis.

12. (CURRENTLY AMENDED) A Coriolis gyro as claimed in
claim 6, characterized by (1'), ~~having a first and a~~
second resonator ~~(70₁, 70₂)~~, which ~~is are~~ each in the form of a
coupled system comprising a first and a second linear oscillator
~~(3₁, 3₂, 4₁, 4₂)~~, with the first resonator ~~(70₁)~~ being
mechanically/electrostatically connected/coupled to the second
resonator ~~(70₂)~~ such that the two resonators can be caused to
oscillate in antiphase with respect to one another along a common
oscillation axis ~~(72)~~.

13. (CANCELED)

14. (CURRENTLY AMENDED) The Coriolis gyro ~~(1')~~ as
claimed in claim 12 ~~or 13~~, characterized in that the
configurations of the first and of the second resonator
~~(70₁, 70₂)~~ are identical, with the resonators ~~(70₁, 70₂)~~ being
arranged axially symmetrically with respect to one another, with
respect to an axis of symmetry ~~(73)~~ which is at right angles to
the common oscillation axis ~~(72)~~.

15. (CANCELED)